

MECHANICAL SEALS PRODUCTION PROGRAM



According:

UNI EN 12756

Petroleum Standard API 682

ATEX (Atmosphere Explosive 94/9/CE)

Food and Drug Administration (FDA)

97/23/CE PED

Single-Helical Spring Seals

Mechanical seals manufactured in a wide range of general services, made according to standard UNI EN 12756 (ex DIN 24960).

Using a conical spring is wound onto the shaft allows the seal to compensate greater positioning errors than usual and there is no risk of clogging when it is in contact with very dirty and/or viscous liquids.

This type of seal is available for both clockwise or anticlockwise shaft rotation.

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
SA	20 ÷ 80	10	Vacuum ÷ 10	-50 ÷ 220	CAT006 ENG
SPBA	20 ÷ 75	20	Vacuum ÷ 50	-50 ÷ 220	CAT007 ENG



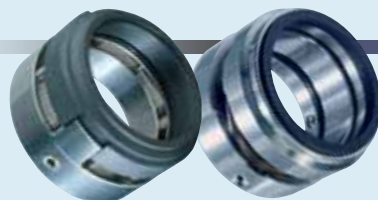
Bi-directional Seals

Very versatile Mechanical Seals manufactured in accordance to UNI EN 12756 (ex DIN 24960) standards, are widely used in the chemical industry and in general duties. They are available in both single-spring and multi-spring balanced versions, for shaft diameters greater than 100 mm, and all of them allow the double directional rotation.

Double seals with single-bodies are available for reducing axial dimensions **UM3AØUM3A - BM3AØBM3A - N3XØN3X - BL3XØBL3X**. (Ref. Catalogues **CAT014 ENG - CAT015 ENG - CAT016 ENG - CAT017 ENG**)

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
US3A*-UM3A	20 ÷ 100	20	Vacuum ÷ 12	-100 ÷ 250	CAT005 ENG
BS3A-BM3A	20 ÷ 100	20	Vacuum ÷ 75	-100 ÷ 250	CAT011 ENG
K1BA	20 ÷ 100	20	Vacuum ÷ 25	-100 ÷ 250	CAT010 ENG
N3X	105 ÷ 200	20	Vacuum ÷ 12	-100 ÷ 250	CAT012 ENG
BL3X	105 ÷ 200	20	Vacuum ÷ 75	-100 ÷ 250	CAT013 ENG

*Available short version **US4A**. (Ref. Catalog **CAT018 ENG**)



Seals with Protected Springs

TBA Mechanical Seals are available compliant with standard UNI EN 12756 (ex DIN 24960).

They are supplied with springs outside of the product, so they can be used in particularly dirty and/or viscous liquids and can be fitted to parallel shafts and sleeves. No shoulder or stepped shaft is required.

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
TBA	20 ÷ 100*	20	Vacuum ÷ 25	-100 ÷ 250	CAT008 ENG
TZKA	35 ÷ 200	30	Vacuum ÷ 100	-100 ÷ 250	CAT009 ENG

*Available inch version **TBAP**. (Ref. Catalog **CAT022 ENG**)



External Seals

Mechanical seals suitable for corrosive fluids, widely used in chemical industry. They are made of special materials resistant to chemical attacks and have no metallic parts in contact with product.

Double seals with single-bodies are available for reducing axial dimensions. Using suitable technical features and special materials we can manufacture versions suitable for dry running, these can also be used also in stirrers.

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
E	20 ÷ 300	10	Vacuum ÷ 15	-100 ÷ 200	CAT026 ENG
EZØEZ	20 ÷ 300	10	Vacuum ÷ 15	-100 ÷ 200	CAT027 ENG
EFC	20 ÷ 70*	10	Vacuum ÷ 15	-30 ÷ 150	CAT032 ENG

*Available inch version.



Metal Bellows Seals

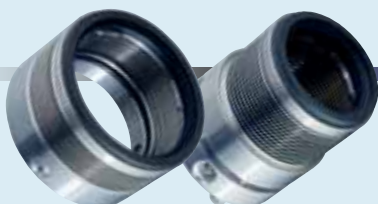
The TSMA Mechanical seals are available compliant with UNI EN 12756 (ex DIN 24960) standards.

The metal bellows design avoids clogging caused by dirty liquid and maintains the axial elasticity required to work in crystallising products.

There are also many versions available for high temperature applications and special cartridge designs complete with flange and cooling jackets.

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
TSMA	20 ÷ 100*	20	Vacuum ÷ 22	-70 ÷ 205	CAT020 ENG
TSHA	20 ÷ 100*	20	Vacuum ÷ 22	-70 ÷ 420	CAT021 ENG

*Available inch versions **TSMAP - TSHAP**. (Ref. Catalogues **CAT023 ENG - CAT024 ENG**)



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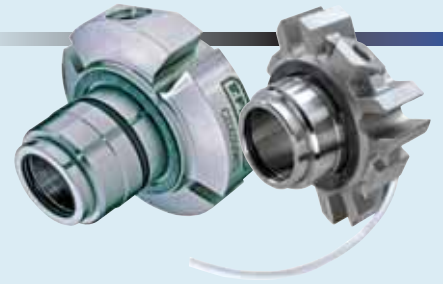
Cartridge Seals

Mechanical seals are available as: single, double complete with pumping ring, single with bush for quench, single and double seals capable for dry running. All of these seals are suitable for DIN and ANSI type flanges, which have very limited radial and axial dimensions and are ideal for pumps, mixers, fans and other equipment.

The cartridge assembly minimises installation problems to a minimum and is suitable for most applications.

There is also a version available with a thicker shaft sleeve and larger internal clearances designed for fitting to equipment and stirrers that are submitted usually to substantial mechanical stresses, oscillation, vibration and run-out.

Type	Diameter (mm)	Speed (m/sec)	Pressure (bar)	Temperature (°C)	Ref. Catalog
C2S	20 ÷ 100	12	Vacuum ÷ 25	-50 ÷ 250	CAT029 ENG
C2K	20 ÷ 100	12	Vacuum ÷ 12	-50 ÷ 200	CAT029 ENG



Ref. Catalog
CAT001 ENG

Seals for Process Pumps

Cartridge mounted mechanically balanced seals, manufactured in accordance with API 682 standards. These seals are designed for heavy duty applications and/or applications which are dangerous to both people and surrounding atmosphere. They offer the best performance possible in terms of reliability and gaseous emission control, making them the ideal solution for petrochemical plants. They are available as single or double seal construction in the various versions required by API Standards.

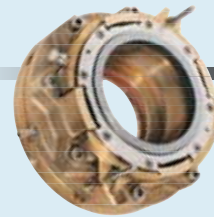
The metallic bellows designs are particularly suited to high temperature and/or corrosive liquids.

Seals for naval applications

Seals have been developed to operate on propeller shafts of small, medium and large size boats where a high level of reliability is required.

The special design allows large axial displacement and the use of suitable material guarantees as well as high resistance to corrosion and high mechanical resistance to withstand stresses produced by vibrations.

The installation of mechanical seals in this particular field has solved problems such as corrosion during long periods of inactivity and shaft damage caused by traditional stuffing boxes. Power absorption is considerably reduced as well.



Ref. Catalog
CAT025 ENG

Seals for Mixers & Agitators

Single seals or double seal units with integral flanged and jacketed casings. Cartridge seals are available with an integral bearing mounted in the seal housing and are available in various options according to the seal type specified.

Specific seals are designed to compensate for use in mixers with high side entry, low side entry and lateral side loading, or for many other machines such as driers, reactors and dynamic filters.

In addition to standard versions we produce specials designed in accordance to specific customers' drawings for use in the pharmaceutical, food and chemical industries.

Ref. Catalog
CAT031 ENG



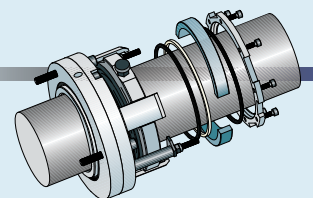
Semi-Split Seals

Semi-Split mechanical seals are employed on a wide variety of pumps or large machinery, where the time available for maintenance operations is limited.

Our sophisticated design allows the substitution of sliding faces, which are completely divided in two halves and suitable to be installed without dismantling the machinery. In addition, the special design of the seal flange makes it suitable to be installed on existing pumps and mixers.

With cartridge execution, all components are pre-assembled in two halves, eliminating any possibility of incorrect installation.

Connections for API plans 11, 13 or 32 are available.



Ref. Catalog
Please call our
Technical Sales Office

Pressure Systems

Standard pressure tanks, manufactured in accordance with API 682 standards, can be supplied in various applications using circulation pumps and process instruments for controlling seal running parameters.

For heavy duty applications there are complete internal flushing and heating/cooling coils to cater for customer's requirements. Proper nitrogen gas panels are available for dry-running mechanical seals.



Ref. Catalog
CAT030 ENG

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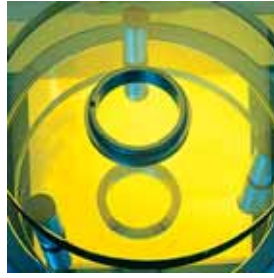
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